Sphere 2: Academic Core

The research in this sphere focused on students' course-taking patterns; the content of those courses; and the quality and methods of instruction. Our examination was restricted to English/ language arts and mathematics.

Our researchers wanted to learn more about how schools placed all students – from the high-performers to those struggling with high school work – into courses. We also examined what actually was taught in those courses and how schools ensured that course content was consistent across sections.

In both states examined, state standards govern what is taught at each grade level in these key academic subjects, and students take state-level assessments that gauge how well they meet standards. But how were standards used? And how were assessment results communicated through the school building and used to inform instruction?

We also looked into teacher and administrator expectations of students, how they were communicated, and whether those expectations made a difference in the actions of teachers, principals, and counselors.

Key Findings: Academic Core

High-impact schools have consistently higher expectations for all students, regardless of students' prior academic performance.

In high-impact schools, students are encouraged to take on academic challenges. In average-impact schools, there are hurdles to gain access to the most challenging courses.

Assessment data is used by high-impact schools for future planning, such as making curriculum improvements or making teacher assignments. Average-impact schools tend to use data primarily to measure past student performance.

Similarities

In many important ways, high- and average-impact high schools are similar. For example, all teachers say they use state standards and most show some evidence of actually doing so. Both sets of schools share some approaches to placing incoming students in ninth-grade courses – weighing factors such as students' eighth-grade test scores; teacher and counselor recommendations; and the preferences of parents and students themselves. All schools in the study had multiple courses of study – such as college prep, general high school graduation, technical and career prep. And finally, the schools all relied on fairly traditional methods of instruction, using textbooks, lectures, and worksheets in their classrooms.

Differences

High expectations; hands-on adults

One big difference centered on expectations for students and how schools helped students meet them. High-impact schools have high expectations for all students, not just those who enter high school as top performers. In addition, the adults in the building – principals, teachers, and counselors – view it as their responsibility to help students succeed academically.

At one high-impact school, for instance, the principal is so committed to ensuring that students take the right classes that he personally reviews and approves the course-registration forms for each of the 1,700 students who attend his school – even when that means carting the forms and

student transcripts home to pore over them in the summer.

We heard time and again from principals and teachers at high-impact high schools that the role of the school was to prepare students for success after high school – whether that was college, postsecondary technical education, or work. And they believed that the responsibility fell to them to ensure students had the opportunity to succeed.

"What we need to do is put them in a position where they can be successful, where they can make choices, rather than having to go to a community college or having to go into the Army," said the principal who reviews mountains of schedules each summer. "We have put them in a position where they can make choices. And the only way you can do that is identify them early, give them the needed help and hope they do the best they can, hope they achieve.

"Because if they don't achieve," he said, "they are not going to make it."

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This hands-on approach extends to counseling. While counselors help with course placement at both high- and average-impact schools, counselors at most high-impact schools go a step further: They meet one-on-one with rising eighth-graders to discuss goals and help with course selection and placement. At most average-impact schools, counselors forego the individual meetings with students.

Door is open to rigorous classes

Historically, most American high schools have made advanced coursework – especially, but not exclusively, Advanced Placement courses – available only to students with high prior achievement and teacher recommendations. That has begun to change. But the change appears far more advanced in our high-impact high schools than the average-impact schools.

Three of four high-impact schools offer open enrollment in honors and Advanced Placement courses, without regard to students' grade-point average or teacher recommendations, provided students can maintain a C average in the class.

At one high-impact school where more than 37 percent of juniors and seniors were enrolled in AP classes, the principal insisted that the number of AP classes bore no relation to the number of "smart kids" at his school. Instead, he argued, "I have a lot of AP courses because kids are taking that chance and taking some of those classes."

Average-impact schools, by contrast, place more barriers to student admission in these challenging courses. At most average-impact schools, students must have a strong academic record in the subject area and a teacher recommendation to enter an honors or AP class.

Data drives decisions

While assessment data are available at all the schools studied, administrators in high-impact schools tend to communicate test-score

information more formally than their peers in average-impact schools and make more of an effort to use the information to improve future curriculum and instruction.

A principal in a high-impact school, for instance, meets with department chairs whenever results become available to discuss patterns in the data and requires that they sit down with each member of the department and discuss individual classroom patterns in the data. Each teacher must spell out in writing how they plan to address any student weaknesses that emerge from the test scores. The exercise helps teachers not only to look at what did and did not get taught last year or semester, but to determine what content and skills need to be focused on in the coming year or semester.

At another high-impact school, the school-improvement team, made up mostly of teachers and parents, examines the data and uses the results to allocate resources, such as offering extra tutoring for students struggling with math, in the coming year.

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On the other hand, a principal in an average-impact school reports that she copies the data for the staff, puts it in their mailboxes, and asks departments to examine the data, but does not sit down face-to-face with teachers and department chairs to analyze the data. And although this principal said she expects the teachers to use the results of the data to plan, a written plan is not required.

Differences in course content

While methods of instruction were similar across all schools – we observed very traditional lectures in most classes – we found significant differences in the content of assignments given to students.

An analysis of math assignments shows that the math skills taught and required in high-impact schools were on grade level about 74 percent of the time, while in average-impact schools this was true only 50 percent of the time. Similarly, the math content in math courses at high-impact schools was on grade level about 57 percent of the time, but only 23 percent of the time for average-impact schools. We defined math skills as the knowledge of algorithms and math content as the application of algorithms to model real-world situations.

Another big difference is in attention to reading. Roughly three in four students at high-impact schools report reading books in their English classes, while only 62.2 percent of students in average-impact schools reported doing so. We also found (see "Time" below) that below-grade level students in high-impact schools spent more instructional time in reading-heavy courses. Surveys of the teachers themselves showed a similar pattern. Nearly 71 percent of English teachers at high-impact high schools reported that they assigned students to read every day. That compares to roughly 59 percent of English teachers at average-impact schools.

The extent of classroom discussion as an instructional tool also differed.

Nearly three in four students surveyed at high-impact high schools say they participate in class discussions, compared to about half of students in average-impact schools.

Interestingly, teachers in high-impact schools were less likely to report tailoring their instruction to the academic level of their students. At average-impact schools, for instance, nearly four in 10 teachers said they matched their teaching styles to student learning styles; closer to two in 10 teachers reported doing so at high-impact schools.

This may seem counterintuitive because the practice of altering teaching styles sounds good on the surface. But our research shows how this can result in lowering academic expectations for some students. Just consider how one ninth-grade English teacher at an average-impact school described what it means to meld her teaching style to the learning styles of her students. "We use visuals," she said. "We have our students make collages, draw pictures that show your understanding of a poem, for example."

To be sure, some examples of this sort of instruction also were found in high-impact schools. But, in high-impact schools, classroom assignments were more likely to be related to helping students master the state standards in English and math than in average-impact schools.